

### **R E M A R K S**

Careful review and examination of the subject application are noted and appreciated.

### **SUPPORT FOR THE CLAIM AMENDMENTS**

Support for the claim amendments may be found in claims 6, 8, 14 and 17, as previously presented. Furthermore, the claimed video signal has been clarified as one video signal per FIG. 6 of the application, as filed. Thus, no new matter has been added and no new issues are believed to be raised.

### **CLAIM REJECTIONS UNDER 35 U.S.C. §112**

The rejection of claims 16-19 under 35 U.S.C. §112, first paragraph, is respectfully traversed and should be withdrawn.

The rejection of claim 8 under 35 U.S.C. §112, second paragraph, has been obviated by the cancellation of claim 8 and should be withdrawn.

Regarding claim 16, MPEP §2163.III.A states:

The examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. *Wertheim*, 541 F.2d at 263, 191 USPQ at 97. In rejecting a claim, the examiner must set forth express findings of fact regarding the above analysis which support the lack of written description conclusion. These findings should:

- (A) Identify the claim limitation at issue and
- (B) Establish a prima facie case by providing reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in

possession of the invention as claimed in view of the disclosure of the application as filed.

In contrast, the Office Action lacks all of evidence, express findings of facts and reasons why one of ordinary skill in the art would not have recognized that the inventor was in possession of the invention as claimed. The Office Action merely provides a conclusory statement that the "Applicant's specification does not specifically or reasonably convey determining the actual size and position of the active region." Therefore, the Office has not meet its burden to established a *prima facie* case and the rejection should be withdrawn.

In the interest of advancing the prosecution, the following example explanation is provided. The specification provides an example on page 5 starting at line 3 where the input signal is a CCIR signal in which the active portion and transition portion together have a known size of 720x486 pixels. One of ordinary skill in the art would have no difficulty understanding that the height of the active portion may be the 486 pixels minus the T parameter and the B parameter and the width of the active portion may be the 720 pixels minus the L parameter and the R parameter. Furthermore, one of ordinary skill in the art would understand that the left-right position of the active portion may be determined by the actual L parameter and the R parameter values. For example, if the L parameter is zero, the active portion is positioned along the left edge of the 720x486 pixel area. The top-

bottom position of the active portion may also be determined by the actual T parameter and the B parameter values. For example, if the T parameter is zero, the active portion is positioned along the top edge of the 720x486 pixel area. Therefore, the specification does convey to one of ordinary skill in the art that the inventor was in possession of the invention as claimed and the rejection should be withdrawn.

**CLAIM REJECTIONS UNDER 35 U.S.C. §103**

The rejection of claims 1-6 and 8-15 under 35 U.S.C. §103(a) as being unpatentable over Vogel, US Pub. No. 2003/0145320 in view of Linzer '102 and Lumelsky et al. '082 (hereafter Lumelsky) has been obviated in part by amendment, is respectfully traversed in part, and should be withdrawn.

The rejection of claim 7 under 35 U.S.C. §103(a) as being unpatentable over Vogel in view of Linzer, Lumelsky and McGee et al. (hereafter McGee), US Pub. No. 2003/0117530, has been obviated in part by amendment, is respectfully traversed in part, and should be withdrawn.

The rejection of claims 16-18 under 35 U.S.C. §103(a) as being unpatentable over Vogel in view of Linzer has been obviated in part by amendment, is respectfully traversed in part, and should be withdrawn.

The rejection of claim 19 under 35 U.S.C. §103(a) as being unpatentable over Vogel in view of Linzer and Hua et al. (hereafter Hua), US Pub. No. 2004/0161154, has been obviated in part by amendment, is respectfully traversed in part, and should be withdrawn.

The rejection of claims 20 and 21 under 35 U.S.C. §103(a) as being unpatentable over Vogel in view of Hua and Wright et al., US Pub. No. 2005/0010944 (hereafter Wright) has been obviated in part by amendment, is respectfully traversed in part, and should be withdrawn.

Vogel concerns a commercial detector (Title). Linzer concerns a digital video compressor with border processor (Title). McGee concerns family histogram based techniques for detection of commercials and other video content (Title). Lumelsky concerns color television window expansion and overscan correction for high-resolution raster graphics displays (Title). Hua concerns learning-based automatic commercial content detection (Title). Wright concerns a method and apparatus for detecting time-compressed broadcast content (Title).

Claim 1 provides generating a plurality of first parameters defining a first transition portion between a first active portion and a first blank portion in a first of a plurality of frames. In contrast, the Office Action agrees that Vogel is silent regarding transition portions of frames. Therefore, Vogel

does not teach or suggest generating a plurality of first parameters defining a first transition portion between a first active portion and a first blank portion in a first of a plurality of frames, as presently claimed.

The Office Action alleges that an encoded inactive region around an encoded active region of Linzer is similar to the claimed first transition portion. However, no evidence is provided in the Office Action to show that Linzer teaches how to generate multiple parameters regarding the encoded inactive region. Therefore, the Office has failed to establish a *prima facie* case that Linzer teaches or suggests generating a plurality of first parameters defining a first transition portion, as presently claimed.

The Office Action further alleged that a non-visible active region around a visible active region of Lumelsky is similar to the claimed first transition portion. However, Lumelsky appears to be silent regarding how to generate multiple parameters regarding the non-visible active region. Therefore, Lumelsky does not appear to teach or suggest generating a plurality of first parameters defining a first transition portion, as presently claimed. Furthermore, no evidence or arguments are presented in the Office Action where Lumelsky allegedly discusses such a capability.

Since the Office has not shown that any of Vogel, Linzer and/or Lumelsky teach or suggest how to generate multiple

parameters for a transition region, there is no rational basis to conclude that a combination of all three references teaches something that is not found in any of the references. For the same reason, there is no reasonable expectation of success for the proposed combination. Therefore, the conclusion made by the Office Action that a combination of Vogel, Linzer and Lumelsky teaches or suggests generating a plurality of first parameters defining a first transition portion between a first active portion and a first blank portion in a first of a plurality of frames cannot be sustained. Claim 10 provides similar language.

Claim 1 further provides that both the first frame and the second frame are of a plurality of frames in one video signal. In contrast, FIG. 3 of Vogel clearly teaches that the first frame is of a first signal received through an input 31 while the second frame is of a second signal received through an input 32 from another region of a network (Vogel paragraph 0031, lines 1-11). The rest of Vogel appears to be silent regarding parameter extraction and comparison of two frames in either input signal (input 31 or input 32). Therefore, Vogel, Linzer and Lumelsky, alone or in combination, do not appear to teach or suggest that both the first frame and the second frame are of a plurality of frames in the video signal, as presently claimed. Claims 10 and 16 provide similar language.

Claim 1 further provides generating a signal indicating (i) the first video type (in the one video signal) when the comparison value is greater than a predetermined threshold and (ii) the second video type (in the one video signal) when the comparison value is less than the predetermined threshold. The Office Action alleges that an output signal of a comparator 36 of Vogel is similar to the claimed signal. However, paragraph 0034, lines 10-11 of Vogel state that the "output of comparator 36 therefore indicates whether the signals are the same or not." Nothing in Vogel mentions that either input signal (inputs 31 and 32) are of a first video type or a second video type as indicated by the output of the comparator 36. Both input signals of Vogel could be of the same type (e.g., a program) and the output of the comparator 36 could indicate either (i) the same when the programs are the same or (ii) not the same when the programs are different or time-skewed. The output signal of comparator 36 of Vogel appears to be ambiguous regarding a video type. Therefore, Vogel, Linzer and Lumelsky, alone or in combination, do not appear to teach or suggest generating a signal indicating (i) the first video type when the comparison value is greater than a predetermined threshold and (ii) the second video type when the comparison value is less than the predetermined threshold, as presently claimed. Claim 10 provides similar language.

Claim 1 further provides (incorporated from former claim 2) that the predetermined threshold determines if the first frame and the second frame are part of an unbroken segment. The Office Action cites the abstract, lines 1-2 and paragraph 0034, lines 1-11 of Vogel in the rejection (of former claim 2):

[Abstract] The invention detects commercials interrupting television programs by comparing signals in a comparator (16)

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[0031] Referring now to FIG. 3, a further variation of the invention will be described. In this embodiment, television signals are received from different regions of a network via inputs 31 and 32, which feed feature extractors 33 and 34 respectively. In this example, the feature extractors reduce the picture to 64 pixels of greyscale and sample the audio envelope 10 times per second, providing low bandwidth data output to comparator 36. Comparator 36 includes a correlator which compensates for any time delay between the inputs 31 and 31 [SIC]. The output of comparator 36 therefore indicates whether the signals are the same or not.

Nowhere in the above cited text, or in any other section, does Vogel appear to discuss determining if two frames of the same video signal are part of an unbroken segment or not. Vogel does not appear to mention any judgement of how two frames in a video signal are related to each other. Vogel only appears to state that the comparator 36 can determine if two frames in two different video signals are the same or not. Therefore, Vogel, Linzer and Lumelsky, alone or in combination, do not appear to teach or suggest that the predetermined threshold determines if the first frame and the second frame are part of an unbroken segment, as presently claimed.



Claim 10 further provides (incorporated from former claim 14) a controller (i) connected between the first detector circuit and the second detector circuit and (ii) configured to control the first detector circuit and the second detector circuit. The Office Action asserts that the output lines from the feature extractors 33 and 34 of Vogel are similar to the claimed controller. However, Vogel appears to be silent regarding the cited output lines controlling the feature extractors 33 and 34, as alleged in the Office Action. No text of Vogel is cited in support of the alleged control capability. Furthermore, the output lines in FIG. 3 of Vogel are shown as unidirectional lines leaving the feature extractors 33 and 34. One of ordinary skill in the art would understand that because no information is shown flowing into the feature extractors 33 and 34 through the output lines, then no control information can flow into the feature extractors 33 and 34 from the output lines. Since no control information can flow into the feature extractors 33 and 34 from the output lines, the output lines cannot control the feature extractors 33 and 34 as alleged in the Office Action. Therefore, Vogel, Linzer and Lumelsky, alone or in combination, do not appear to teach or suggest a controller (i) connected between the first detector circuit and the second detector circuit and (ii) configured to control the first detector circuit and the second detector circuit, as presently claimed.

Claim 16 provides determining both a first size and a first position of a first truly active region of in a first of a plurality of frames. Despite the assertion on page 17 of the Office Action, the feature extractors 33 and 34 of Vogel in FIG. 3 and paragraphs 0006, 0008, 0009, 0013, 0015 and 0031 of Vogel do not appear to determine both a size and position of a truly active region of a frame received in the signal 31. Furthermore, the Office Action agrees on page 18 that the feature extractors 33 and 34 of Vogel **do not** extract a size or position of a truly active region of the frames. Therefore, Vogel does not appear to teach or suggest determining both a first size and a first position of a first truly active region of in a first of a plurality of frames, as presently claimed.

The Office Action asserts that Linzer teaches "calculating the four parameters T, B, L and R" in FIG. 3, FIG. 5, column 2 lines 4-10 and column 3 lines 14-17. In contrast, the Office Action fails to cite anything specific in FIGS. 3 and 5 of Linzer in support of the allegation that they teach calculations of 4-set parameters T, B, L and R. Furthermore, the cited text of Linzer reads as follows:

Normally, when an encoded video signal is decoded and displayed, not all of the decoded pixels are visible. This situation is illustrated in FIG. 3. Clearly, the process of encoding video which is not visible is an inefficient "waste" of bits. Accordingly, it is an object of the present invention to improve the efficiency of the encoding process by reducing or eliminating such bit waste. (Col. 2:4-10)

...

Preferably also, the number of black columns inserted on each of the left and right edges, and the number of black rows inserted on the top and bottom edges, are chosen to be a multiple of the DCT block size used. (Col. 3:14-17)

Nowhere in the above cited text does Linzer appear to mention calculating 4-set parameters T, B, L and R, as alleged in the Office Action. Furthermore, Linzer teaches that the number of black columns and the number of black rows "are chosen to be a multiple of the DCT block size used." There is no evidence on record that the 4-set parameters T, B, L and R are multiples of a DCT block size. Therefore, the Office Action failed to establish a *prima facie* case that Linzer teaches or suggest determining both a first size and a first position of a first truly active region of in a first of a plurality of frames, as presently claimed.

Since the Office Action has not shown that Vogel and/or Linzer teach or suggest how to determine both a size and a position of a truly active region, there is no rational basis to conclude that a combination of both references teach something that has not been shown to exist in either of the references. For the same reason, there is no reasonable expectation of success for the proposed combination. Therefore, the conclusion made by the Office Action that a combination of Vogel and Linzer teaches or suggests determining both a first size and a first position of a first truly active region of in a first of a plurality of frames cannot be sustained.

Claim 16 further provides that both the first frame and the second frame are of a plurality of frames in one digital video signal. In contrast, FIG. 3 of Vogel clearly teaches that the first frame is of a first signal received through an input 31 while the second frame is of a second signal received through an input 32 from another region of a network (Vogel paragraph 0031, lines 1-11). The rest of Vogel appears to be silent regarding parameter extraction and comparison of two frames in either input signal (input 31 or input 32). Therefore, Vogel and Linzer, alone or in combination, do not appear to teach or suggest that both the first frame and the second frame are of a plurality of frames in one digital video signal, as presently claimed.

Claim 16 further provides (from former claim 17) generating a signal to indicate a presence of the scene transition between the commercial and the program when at least one of the first size and the first position of the first truly active region is not substantially similar to a corresponding at least one of the second size and the second position of the second truly active region. Assuming, *arguendo*, that the teachings of Linzer are obvious to combine with Vogel (for which Applicant's representative does not necessarily agree), the proposed combination would not be able to detect the presence of a scene transition as presently claimed. In particular, the alleged teaching of Linzer to blacken all of the encoded inactive region would result in the size and the

position of all truly active regions, both program and commercial, to be the same as the encoded active region. Since Linzer would cause commercials and programs to have the same size and position as transmitted, there are no differences in size or position between the frames for the system of Vogel to detect. Therefore, Vogel and Linzer, alone or in combination, do not appear to teach or suggest generating a signal to indicate a presence of the scene transition between the commercial and the program when at least one of the first size and the first position of the first truly active region is not substantially similar to a corresponding at least one of the second size and the second position of the second truly active region, as presently claimed.

Furthermore, Linzer remains as non-analogous art relative to Vogel based on the U.S. classifications and subject matter per their respective titles. The Office Action notes that "it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention." The Office Action alleges that Linzer is analogous "because it is discussing the typical video frame setup which has the 4-set parameters T, B, L and R which helps Vogel's teachings of video frames." In contrast, the allegation that Linzer is analogous art appears to be a conclusory statement and does not

appear to match any criteria set out in the Office Action per the following.

Despite the assertion in the Office Action, no evidence has been presented that Linzer mentions how to determine the 4-set parameters T, B, L and R. In particular, the 4-set parameters only appear to be mentioned in the specification of the present invention. Therefore, the Office Action appears to be using the teachings of the present invention to justify Linzer as analogous art, which is an improper use of the teachings of the specification against the pending claims.

The Office Action further alleges that the 4-set parameters (improperly) attributed to Linzer would "help" Vogel. However, this allegation is merely a conclusory statement lacking any supporting evidence. No evidence, rational or explanation is provided in the Office Action why an existence of the encoded inactive region of Linzer would somehow "help" Vogel. Therefore, the "help" allegation cannot be sustained.

Furthermore, no evidence is provided in either of the Office Actions to counter the evidence previously presented which suggests that Linzer is not in the field of applicant's endeavor. No evidence is provided in either Office Action that Linzer is reasonably pertinent to the particular problem with which the applicant was concerned. Therefore, Linzer remains non-analogous

art and all of the rejections based on the combination of Vogel and Linzer should be withdrawn.

Furthermore, the assertion in the Office Action, "reducing the complexity be eliminating the inefficient waste of bits", does not explicitly establish **an apparent reason** why one of ordinary skill in the art would have combined Vogel and Linzer **in the manner claimed**. *KSR Int'l Co. V Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007). The "waste" of Linzer involves encoding the video, not parameter extraction. Furthermore, there is no evidence on record that the teachings of Linzer would actually reduce the complexity of Vogel. Linzer concerns "improving the efficiency of the encoding process" (column 2, lines 8-10). The feature extraction of Vogel concerns decimating frames down to 64 pixels of greyscale after reception and decoding (paragraph 0031, lines 1-11). There is no evidence or explanation on record connecting the improved encoding efficiency at the transmitter with reducing the complexity of a decimation at the receiver, as alleged in the Office Action. As such, the selection of Linzer appears to be based solely on the claim language, which is improper hindsight. Therefore, *prima facie* obviousness has not been established and all of the rejections based on Vogel and Linzer should be withdrawn.

Furthermore, Lumelsky appear to be non-analogous art relative to Vogel and Linzer based on the U.S. classifications and subject matter per the respective titles. The Office Action

provides no evidence that one of ordinary skill in the art would consider the references to be analogous. In contrast, Lumelsky appears to have been chosen only because it has a figure that the Office needs for the rejections, which is improper hindsight. As such, *prima facie* obviousness has not been established and all of the rejections based on Vogel and Lumelsky should be withdrawn.

Furthermore, no evidence of motivation is provided in the Office Action to combine Lumelsky with Vogel and/or Linzer. The choice of Lumelsky in the rejection appears to be based solely on the language of the claims, which is an improper hindsight. Therefore, *prima facie* obviousness has not been established and all of the rejections based on the combination of Vogel and Lumelsky should be withdrawn. As such, claims 1, 10 and 16 are fully patentable over the cited references and the rejection should be withdrawn.

Claim 20 provides generating a plurality of first parameters defining a signature of a first segment of a plurality of program segments independent of a content of the first segment. In contrast Vogel teaches in paragraph 0031, lines 1-11 that the extracted features are 64 greyscale pixels. The only source of luminance available to the feature extractors 33 and 34 of Vogel that could be used to generate the greyscale pixels is the content of the two video signals (inputs 31 and 32). Therefore, Vogel



teaches that the parameters are dependent on the content of the video.

Hua also teaches that the "signature" for a program segment is dependent on the video. In particular, the abstract of Hua states, "The context-based features are a function of single-sided left and/or right neighbors of segments of the multiple segments." Therefore, Hua teaches that the parameters are dependent of the video.

Wright also teaches that identification data 22 is dependent on the video content. In particular, paragraph 0024 of Wright indicates that video having program-type content includes the source identification data (SID) and video having commercial-type content lacks the SID. Furthermore, paragraph 0014 of Wright states that the SID may include "unique content identification codes." The Office Action appears to be confusing the claimed **generation** of the first parameters independent of the content with the teaching of Wright that **positioning** of the content-dependent information is outside the active content portion of the frames.

Since all of Vogel, Hua and Wright teach that parameters are content dependent, there is no rational basis to the assertion in the Office Action that the combination of all three references teaches or suggests that the parameter generation is independent of the content. For the same reason, there is no reasonable expectation of success for the proposed combination. Therefore,

Vogel, Hua and Wright, alone or in combination, do not appear to teach or generating a plurality of first parameters defining a signature of a first segment of a plurality of program segments independent of a content of the first segment, as presently claimed.

Furthermore, Applicant's representative respectfully traverses the assertion in the Office Action that "Wright shows that the identification data could be a parameter which could be extracted by Vogel's feature extractor." Since Vogel teaches decimation of the frames down to 64 greyscale pixels, it is unclear and doubtful that all of a source identification, a date and a time stamp embedded within the video blanking intervals could somehow be extracted from only 64 greyscale pixel values. For this reason, there is no expectation of success for the proposed combination of Vogel, Hua and Wright. There is no evidence to the contrary on the record. As such, the Office Action has not established a *prima facie* obviousness for lack of evidence of a reasonable expectation of success.

Claim 20 further provides generating a plurality of second parameters defining a second signature of a second segment of the video signal. Assuming, *arguendo*, that the identification data of Wright can somehow be extracted by the feature extractors of Vogel as alleged in the Office Action (for which Applicant's representative does not necessarily agree), the proposed

combination of Vogel, Hua and Wright teaches away from the claimed generation of the second parameters. In particular, paragraph 0024 of Wright indicates that commercial content video lacks the SID and thus no second parameters would be generated for such segments. As such, Vogel, Hua and Wright, alone or in combination, do not appear to teach or suggest generating a plurality of second parameters defining a second signature of a second segment of the video signal, as presently claimed.

Furthermore, Wright appears to be non-analogous art relative to Vogel and Hua based on the U.S. classifications and subject matter per the respective titles. The Office Action provides no evidence that one of ordinary skill in the art would consider the references to be analogous. In contrast, Wright appears to have been chosen only because the Office (incorrectly) believes that it teaches the claimed generation of the parameters independent of the content, which is improper hindsight. As such, *prima facie* obviousness has not been established and the rejections should be withdrawn.

Furthermore, the assertion in the Office Action, "to provide a merge and generation of commercial and non-commercial blocks of content and avoid viewing/recording commercial content", does not explicitly establish **an apparent reason** why one of ordinary skill in the art would have combined Vogel and Hua **in the manner claimed**. *KSR Int'l Co. V Teleflex, Inc.*, No. 04-1350 (U.S.

Apr. 30, 2007)). The alleged motivation does not explain why and how the feature extractor functions of Vogel would be obviously made to operate independently of the content as alleged in the Office Action. As such, the selection of Hua appears to be based solely on the claim language, which is improper hindsight. Therefore, *prima facie* obviousness has not been established and all of the rejections based on Vogel and Hua should be withdrawn.

Furthermore, the assertion in the Office Action, "to further enhance the identification of commercial and program segments", does not explicitly establish **an apparent reason** why one of ordinary skill in the art would have combined Vogel and Hua with Wright **in the manner claimed**. *KSR Int'l Co. V Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007)). The alleged motivation does not explain why and how the feature extractor functions of Vogel would be obviously "enhanced" by the teachings of Wright as alleged in the Office Action. Furthermore, no evidence is on record to support the assertion that the combination would actually cause an enhancement. Still further, paragraph 0024 of Wright does not make any "enhancement" assertions as alleged in the Office Action. As such, the selection of Wright appears to be based solely on the claim language, which is improper hindsight. Therefore, *prima facie* obviousness has not been established and all of the rejections based on Vogel, Hua and Wright should be withdrawn.

Claims 2-7, 9, 11-13, 15, 18, 19 and 21 depend from claims 1, 10, 16 and 20, which are now believed to be allowable. As such, the dependent claims are fully patentable over the cited references and the rejections should be withdrawn.

**SHOWING UNDER 37 CFR §1.116**

After a final rejection, an amendment canceling claims may be made (37 CFR §1.116(b)(1)). Also, an amendment touching the merits of the application may be admitted upon a showing of good and sufficient reasons why the amendment is necessary and was not earlier presented (37 CFR §1.116(b)(3)). The amendments presented herein either cancel claims or are necessary to rebut the new ground of rejection presented for the first time in the final Office Action. The amendments rebutting the new ground of rejection would not reasonably have been presented earlier because the reference forming the basis for the new ground of rejection was first present on the record in the final Office Action.

Furthermore, the amendments involve incorporating subject matter from the cancelled dependent claims and, therefore, are believed to better focus, if not remove issues for appeal, or require only a cursory review by the Examiner in conjunction with the arguments presented to rebut the rejections of the dependent claims. As such, the amendments presented herein are believed to be compliant with the showing requirement under 37 CFR §1.116(b)(3)

and Applicant respectfully requests that the amendments be admitted.

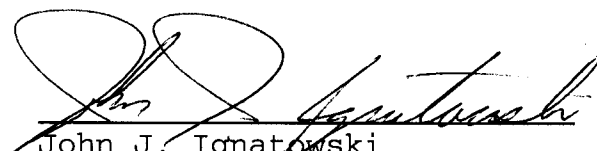
Accordingly, the present application is in condition for allowance. Early and favorable action by the Examiner is respectfully solicited.

The Examiner is respectfully invited to call the Applicant's representative between the hours of 9 a.m. and 5 p.m. ET at 586-498-0670 should it be deemed beneficial to further advance prosecution of the application.

If any additional fees are due, please charge Deposit Account No. 12-2252.

Respectfully submitted,

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Dated: October 9, 2007

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LSI Corporation

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